CLAIMS

What is claimed is:

1. A peptide compound, comprising about ten to about 50 amino acids in a sequence, wherein the peptide compound enhances bone growth, wherein each amino acid may be in D- or L- conformation, and wherein the sequence comprises a motif selected from the group consisting of an integrin binding motif, a glycosaminoglycan binding motif, and a calcium binding motif.

2. The peptide compound of claim 1, wherein the integrin binding motif is an RGD sequence.

3. The peptide compound of claim 1, wherein the glycosaminoglycan motif has the sequence SGDG.

4. The peptide compound of claim 1, wherein the calcium binding motif has the sequence DXDXSXFXGXXQ, wherein X is any amino acid.

5. The peptide compound of claim 4, wherein the calcium binding motif has the sequence DNDISPFSGDGQ.

6. A multimer of the peptide of claim 1.

7. A formulation comprising:

a carrier; and

a therapeutically effective amount of a peptide of claim 1.

8. The formulation according to claim 7, wherein the carrier is a saline solution and the formulation is injectable.

9. The formulation according to claim 7, wherein the carrier is a paste and the formulation is a toothpaste.

10. The formulation according to claim 7, wherein the carrier is an aqueous flavored solution and the formulation is a mouthwash.

11. A patch for oral delivery of a compound, said patch comprising a formulation according to claim 7.

12. A method of reducing bone loss, comprising administering to an individual an effective amount of a peptidic compound according to claim 1.

13. A method of reducing renal phosphate excretion in an individual, comprising administering to an individual an effective amount of a peptidic compound according to claim 1.